

KONOVALOVA, G. F.

35494. Tuberkulinoterapiya pri tuberkulosnykh zabolеванийах. Glaz. Trudy
sev.-oset. Gos. Med. In-ta, vyp. 4, 1949, c. 170-73.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

35564 KONOVALOVA, G. F. Primeneniye Penitsillina v Glaznoy Praktike. Trudy sev.-oset.
Gos. Med. In-ta, vyp. 4, 1949, c. 196-201

SO: Letopis Zhurnal'nykh Statey, Vol. 45, 1949

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Moscow. Dom nauchno-tehnicheskoy propagandy imeni P.E. Dzerzhinskogo
Noytsye v tekhnologii vysokopribytochnykh stroyov. Novykh featurakh metodov
shirokikh trudov konferentsii. [New Features in the Methods of
High-productivity Sheet Metal Stamping]. Collection of Conference
Transactions. Moscow. Mashgiz. 1959. 228 p. 8,000
copies printed.

Sponsoring Agency: Obrabotka po rasprostraneniyu politicheskikh i'
nauchnykh znamykh SSSR.

Resp. Ed.: V.T. Meshcherin, Doctor of Technical Sciences, Professor;
Zin'ya V.D. Golovlev, Candidate of Technical Sciences, Docent; and
Yuri M. Lanskoy, Candidate of Technical Sciences, Docent. Eds. of
Publishing House: G.M. Sosulin, Tech. Ed.; V.I. Medvedev,
Managing Ed., for Literature on Heavy Machine Building (Religie);
S.Ya. Golovin, Eng. Mscer.

PURPOSE: This collection of papers is intended for engineers and
technicians in sheet metal stamping. It may also be useful to
students of various and techniques.

COVERAGE: This collection deals with the design and features of
some current problems in sheet metal stamping. Also discussed
are processing methods still in the experimental stage. Several
articles deal with the mechanization and automation of stamping
processes and describe recently developed methods such as
explosion forming, the use of automatic rotary transfer lines,
and press blocking with the use of radioactive isotopes. No
personalities are mentioned. References follow several of
the articles.

Artem'yev, S.I. [Engineer, Gor'kiy Motor Vehicle Plant].
New Features in the Automation of Sheet Metal Stamping at
the Gor'kiy Motor Vehicle Plant 160

The article discusses devices for automatic removal of
formed parts from the press, devices for automatic feeding
of sheet metal into the die, and devices for complete
automation of the forming process.

Nikolayev, V.V., and B.V. Serobzin. [Arcosavod imeni
Likhacheva, Molkva (Moscow Motor Vehicle plant)].
Experience of the Motor Vehicle Plant imeni Likhacheva
with High-productivity Progressive Die Sets 169

Compound, combination, and progressive die sets with
rectilinear and circular feeding motion of blanks are
described. Mechanization of feeding and removal of
stamped parts and scrap are discussed.

Ellina, I.S. [Engineer, Zavod "Krasnaya Zarya," Leningrad
(Leningrad "Red Star" Plant)]. Transfer Machine for
Mixing Contact Springs 199

Arrangement and operation of a universal transfer
machine for making springs for flat relays is described.
Reduction in cost, time, and man-hours are shown.

Konovalova, I.I. [Engineer, Zavod "Metallozideliye,"
[Combined Metal Products Plant]). Transfer Machines for
Making Safety-factor Blades 206

Fabricating processes and machinery for automatic lines
are described, and information on tool life, heat treat-
ment, grinding, and packing of blades is given.

Lankov, Ya.N. [Candidate of Technical Sciences, Docent,
Moscow Machine Tool and Instrument Institute]. Selection
of a Crank Press for Required Force and Work Parameters 217

The author discusses flywheel effect, the meaning of
nominal force (capacity), the magnitude of force at
various angles of the crank, the work delivered by motor
and flywheel, and the work of deformation. Recommendations
for selecting the proper press for a given stamping
operation are presented.

AVAILABLE: Library of Congress

Card 9/9

GO/ejr
10-21-59

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

ALEKSEYEVA, Ye.A., inzh.; GRUZDOV, A.P., inzh.; IL'IN, Ye.P., inzh.; KONOVALOVA,
I.N., inzh.; MAKSIMOVA, O.V., inzh.; SHTREMEL', M.A., inzh.

Temperature dependence of elastic properties of thin-sheet spring
alloys. Priborostroenie no.9:25-27 S '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

BOTVINIK, M.M.; KONOVALOVA, I.M.

Reactions of N-imidazolacyl derivatives of histidine with serine
derivatives. Zhur. ob. khim. 35 no.6:1123 Je '65.

(MIRA 18:6)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

ACC NR: AP5028963 SOURCE CODE: UR/0119/64/000/00970025/0027

AUTHOR: Alekseyeva, Ye. A. (Engineer); Gruzgov, A. P. (Engineer); Il'in, Ye. P. (Engineer); Konovalova, I. N. (Engineer); Maksimova, O. V. (Engineer); Shtremel', M. A. (Engineer)

ORG: none

TITLE: Effect of temperature on elastic properties of thin-sheet spring alloys

SOURCE: Priborostroyeniye, no. 9, 1964, 25-27

TOPIC TAGS: spring, measuring instrument, industrial instrument

ABSTRACT: The results are reported of measurements of the elastic limit σ_e (with residual strains of 0.01 and 0.005%) and elasticity modulus E in bending of 85-120-micron thick specimens (10x100 mm) of BrOF6, 5-0, 15, BrKMTs 3-1, BrB2, BrBNT 1, 9 bronzes, 60Sz, EI814 steels, and N36KhTYuM8 alloy at temperatures that ranged from -70°C to +150 or +500°C. Also, the ultimate strength σ_u and the yield point σ_y of 0.1x10-mm 57-mm long specimens were determined. All specimens were thermally treated according to specifications normally used in the

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UDC: 620.172.22:62-415:536.49

8
New method of synthesis of esters of
the alkene dicarboxylic acids. XXVI. 1. New
method of phosphorylation of esters of
esters of unsaturated carboxylic acids.

2. Preparation of esters of unsaturated
carboxylic acids.

3. Preparation of esters of unsaturated
carboxylic acids.

4. Preparation of esters of unsaturated
carboxylic acids.

COP(SH)ER, 1960, 11, 4811, 4812. Action
of (RO)₂POH to esters of HCO₂ and phenyl and allyl
mimic acids in the presence of LiONa resulted in an ap-
parent reaction in each case but the products decomposed
during attempted distn. Addit. of 10% to equimolar
mixt. of AcOCH₂CH₃ and either (AO₂PSi or RP(O)₂-
OR gave similarly: 48% $\text{B}(\text{OPE}(\text{O})\text{VCH}_2\text{CO}_2)$, b. 110-
112°, n_D²⁰ 1.4301; bp 1.0108; 51.5% $\text{B}(\text{OPE}(\text{O})\text{VCH}_2\text{CO}_2)$,
b. 123-125°, n_D²⁰ 1.4112; d. 1.0108; 35% $\text{B}(\text{OPE}(\text{O})\text{VCH}_2\text{CO}_2)$,
Ac, b. 110-50°, n_D²⁰ 1.4990; bp 1.1329; 33% $\text{B}(\text{O}_2\text{P}(\text{S})\text{VCH}_2\text{CO}_2$,
CH₂CH₂OAc, bp 125-7°, n_D²⁰ 1.4990; d. 1.1107 (the mixt. in
this case must be heated preliminarily with Et₃N). The
attempted reaction of $\text{B}(\text{OPE}(\text{O})\text{VCH}_2\text{CO}_2)$ with
 $\text{CH}_2=\text{CH}-\text{CH}_2-\text{CH}_2-\text{PO}(\text{O})(\text{CH}_3)_2$ gave a mixture of
products, b. 110-112°, n_D²⁰ 1.4301.

PUDVIK, A.N.; KOROVALOVA, I.V.

New method for the synthesis of phosphinic and thiophosphinic acids.
Part 28: Reaction of incomplete phosphorous acid esters with
 α, β -unsaturated cyclic ketones and cyclohexenol acetate. Zher.
ob.khim. 27 no.6:1617-1621 Je '57. (: LRA 10:7)

I.Kazanskiy gosudarstvennyy universitet.
(Phosphorous acid) (Cyclohexenol) (Ketones)

AUTHORS: Pudovik, A. N., Konovalova, I. V.

79-28-5-16/69

TITLE: A New Method of Synthesis of the Esters of Phosphinic and Thiophosphinic Acids (Novyy metod sinteza esterov fosfinovykh i tiofosfinovykh kislot) XXIX. Addition of Dialkylphosphorous Acids to the Esters of the Vinyl-Alkrylic- and Sorbic Acid, as Well as to the 3,5-Heptadienone-2 (XXIX. Prisoyedineniye dialkilfosforistykh kislot k estiram vinilakrilovoy, sorbinovoy kislot i 3,5-heptadiyenonu-2)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5,
pp. 1208 - 1211 (USSR)

ABSTRACT: In continuation of earlier papers (Reference 1) the authors describe the results of the addition reactions of dimethylphosphorous and diethylphosphorous acids to the esters of the β -vinylakrylic- and sorbic acids, to 3,5-heptadienone-2, and to the diethylester of butadieneephosphinic acid. Alkali alcoholates were used as catalysts in these reactions. All reactions take a vigorous course and are accompanied by a considerable heat effect. Products of the addition of one or two molecules were obtained as result of the addition of diethylphosphorous acid (in excess) to the ethylester of β -vinylakrylic

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79-28-5-16/69

A New Method of Synthesis of the Esters of Phosphinic and Thiophosphinic Acids. XXIX. Addition of Dialkylphosphorous Acids to the Esters of the Vinyl-Alkrylic- and Sorbic Acid, as Well as to the 3,5-Heptadienone-2

acid, namely: the ethylesters of 4-(diethylphosphonium)butene-2-carboxylic acid (formula I of scheme 1) and 2,4-di-(diethylphosphonium)butanecarboxylic acid (II). The structure of (I) was hardened by ozonization and decomposition of the ozonides. The binding of diethylphosphorous acid to the ethylsorbinate also leads to the formation of two products (III and IV of scheme 2). Product (III) contains a double bond and represents a product of the addition of a molecule of diethylphosphorous acid. From the obtained ozonization results could be concluded that (III) represents mainly a γ,δ -product of the addition, which contains the forms α,β - or α,δ -(or both together). Product (IV) does not contain a double bond and represents an addition product of two molecules of diethylphosphorous acid to 3,5-ethylsorbinate. In the case of the addition of diethylphosphorous acid to 3,5-heptadienone-2, compound (V) with a double bond resulted. By ozonization

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79-28-5-16/69

A New Method of Synthesis of the Esters of Phosphinic and Thiophosphinic Acids. XXIX. Addition of Dialkylphosphorous Acids to the Esters of the Vinyl-Alkrylic-and Sorbic Acid, as Well as to the 3,5-Heptadienone-2

and further treatment of the ozonides this formula was proved.
There are 2 references, which are Soviet.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet (Kazan' State University)

SUBMITTED: May 3, 1957

Card 3/3

S/079/60/030/007/014/020
B001/B067

AUTHORS: Pudovik, A. N., Konovalova, I. V.

TITLE: A New Method of Synthesizing the Esters of Phosphinic and Thiophosphinic Acid.¹ XXXIV. Addition of Dialkyl Thiophosphorous Acids and Acid Esters of Ethyl- and Phenyl Phosphinic Acid to Unsaturated Hydrocarbons

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7,
pp. 2348 - 2352

TEXT: In continuation of their earlier paper (Ref. 1) the authors studied the addition reactions of dialkyl thiophosphorous acids and acid esters of alkyl- and aryl phosphinic acids. They proceeded from diethyl-, di-n-propyl-, diisopropyl-, di-n-butyl thiophosphorous acid, from methyl-, ethyl-, butyl ester of ethyl phosphinic acid, and from methyl-, ethyl ester of phenyl phosphinic acid. The addition was made to hydrocarbons of the aliphatic series, from heptene-1 to undecene-1, and to cyclohexene. The reactions took place under irradiation of the reaction mixtures with a mercury-quartz lamp or under heating in the presence of

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A New Method of Synthesizing the Esters of Phosphinic and Thiophosphinic Acid. XXXIV. S/079/60/030/007/014/020
Addition of Dialkyl Thiophosphorous Acids and Acid Esters of Ethyl- and Phenyl Phosphinic Acid to Unsaturated Hydrocarbons B001/B067

benzoyl peroxide. In both cases, the same alkyl thiophosphinates, dialkyl phosphinates, and the esters of alkyl-phenyl phosphinic acids were obtained with yields of 40-65%. A scheme of the reaction course is given. The reactions (1-3) show the initiation process and the growth of the chain, as well as the formation of the addition product. Reaction (4) causes the formation of the polymer residue at the expense of further telomerization. At an equivalent ratio of the initial reagents the polymeric residue is formed in a quantity of 10-15% of the addition product. It was shown that the dialkyl thiophosphorous acids and the acid esters of phosphinic acids add to olefins even without catalysts; a prolonged heating at 135-140° is sufficient. The addition products which were obtained by irradiation on the one hand and by the presence of benzoyl peroxide on the other are identical. The reaction rate in the case of cyclohexene was characterized by a change in concentration of the acid in the reaction mixture. It was shown that with increasing radical the phosphinate yield is gradually and slowly reduced (Fig. 1).

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A New Method of Synthesizing the Esters of Phosphinic and Thiophosphinic Acid. XXXIV. Addition of Dialkyl Thiophosphorous Acids and Acid Esters of Ethyl- and Phenyl Phosphinic Acid to Unsaturated Hydrocarbons

S/079/60/030/007/014/020
B001/B067

The alkyl thiophosphinates, dialkyl phosphinates, and alkyl-phenyl phosphinates are characterized in Tables 1 and 2. The acids obtained from them by saponification are given in Table 3. On the basis of the experimental results the authors arrived at the conclusion that the addition of dialkyl thiophosphorous acids to olefins in both cases does not proceed according to the Markovnikov rule but to the radical mechanism (Scheme 2). There are 2 figures, 3 tables, and 2 Soviet references.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet (Kazan' State University)

SUBMITTED: July 6, 1959

Card 3/3

KONOVALOVA, I. V.

Cand Chem Sci - (diss) "Addition of unsaturated /nepolnyye/ esters of phosphorus acids to non-saturated electrophilic compounds and non-saturated hydrocarbons." Kazan', 1961. 12 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Kazan' Chemical Technology imeni S. M. Kirov); 150 copies; price not given; (KL, 7-61 sup, 222)

PUDOV~~E~~, A.N.; KONOVALOVA, I.V.

New method of synthesizing esters of phosphinic and thiophosphinic acids. Part 35: Addition of phosphorus pentochloride to diene hydrocarbons and of partial esters of phosphorus acids to butadiene-phosphinic esters. Zhur.ob.khim. 31 no.4:1693-1699 My '61.
(MIRA 14:5)

1. Kazanskiy go~~s~~udarstvennyy universitet.
(Phosphinic acid)

25367

S/079/61/031/008/005/009
D215/D304

15.8150

AUTHORS: Pudovik, A.N., Konovalova, I.V., and Durova, O.S.

TITLE: A new synthesis method of phosphinic and thiophosphinic acids and esters. XXIII. Synthesis of unsaturated phosphonic and thiophosphonic acids esters

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 8, 1961, 2656-2661

TEXT: This study is a continuation of previous investigations, in which it was found that derivatives of unsaturated acids of phosphorus can be obtained by adding to their incomplete esters acetylene compounds, activated with some electron repellent groups in presence of an alkaline catalyst. In this work it is shown that this method may be applied to acetylene compounds directly in conditions stimulating the mechanism of free radicals chain addition. As incomplete esters of phosphorus acids, the following compounds were used: dimethyl and diethyl-phosphorous acid esters, diethyl and di-isopropylthiophosphorous acid esters, and ethyl and isopropyl ethyl phosphonic acid esters. The addition of these

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25367

S/079/61/031/008/005/009

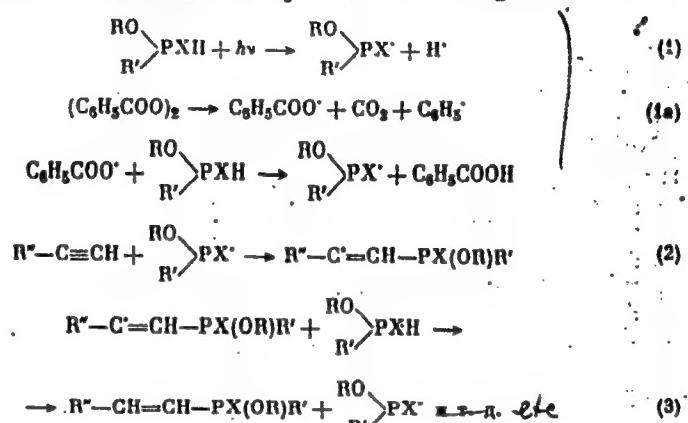
D215/D304

A new synthesis method ...

esters to heptyne-1 and octyne-1 was carried out by irradiating the reaction mixture with ultra-violet light or in presence of hexoyl-peroxide. The chain reaction is illustrated by the following reactions.

(1), (1a), (2) and (3) correspond to initiation chain-growing and the formation of the addition product; N(4) - formation of the polymerization product. In both synthesis reactions (irradiation or hexoylperoxide), the same products - esters of alkenyl phosphoric or alkenylthiophosphonic acids were obtained,

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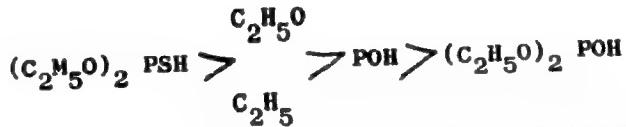
25367

S/079/61/031/008/005/009
D215/D304

A new synthesis method...

[Abstractor's note: British nomenclature of phosphorus organic compounds is used: "onic" for quinquevalent and "inic" for tervalent P] with a yield of 25-50%, the esters being mobile, colorless liquids, sparingly soluble in water, highly soluble in organic solvents. Their characteristics are given in tabulated form. The structure of addition products was proved by the oxidation of the diethyl ester of hephenyl-thiophosphonic acid with KMn O₄, when n - caproic acid was obtained.

The authors investigated the addition reaction velocity of heptyne-1 to acidic ethylesters of phosphorous, thiophosphorous and ethylphosphinic acids; they found that the velocity of reaction decreased in the following series:



The obtained results prove that the investigated reactions take place through free radicals chain mechanism and against Markownikoff's rule

Card 3/5

25367

S/079/61/031/008/005/009
D215/D304

A new synthesis method...

Abstractor's note: His name is written thus in technical literature]. The velocity of addition reactions of the above-mentioned esters with heptane-1, heptyne-11 and phenylacetylene decreases as follows: heptane-1 heptyne-1 phenyl-acetylene. The velocity of reactions are given graphically. It is seen that the velocity of reaction with benzoylperoxide is quite similar to that which is carried out by irradiation and that the addition reaction with phenylacetylene is much slower than others. The yield of the last reaction was very low, due to the resinification of reagents. The obtained product: diethylester of β -phenylvinylthiophosphonic acid was described by previous investigators, but its constants given by them differ from those found by the authors; the previously published constants were erroneous because MR based on the given data is markedly different from the calculated one. The authors carried out the synthesis of di-phosphonic derivatives by adding di-ethylphosphorous and di-ethylthiophosphorous acids to the diethylester of heptenylthiophosphonic acid, in the presence of sodium ethoxide, the reaction being an ionic one. The reaction products are thick, colorless liquids,

Card 4/5

PUDOVIK, A.N.; KONOVALOVA, I.V.; ISHMAYEVA, E.A.

New method of synthesizing phosphinic and thiophosphinic acid esters.
Part 37: Addition of nucleophilic reagents to butadiene- and
methylbutadienephosphinic esters. Zhur. ob. khim. 32 no.1:237-241
Ja '62. (MIRA 15:2)

1. Kazanskiy gosudarstvennyy universitet.
(Phosphinic acid)

PUDOVIK, A.N.; KONOVALOVA, I.V.; DUROVA, O.S.

New method of synthesizing esters of phosphinic and thiophosphinic acids. Part 38: Synthesis of esters of unsaturated phosphinic and thiophosphinic acids. Zhur.ob.khim. 31 no.8:2656-2661 Ag '61. (MIRA 14:8)

1. Kazanskiy gosudarstvennyy universitet.
(Phosphinic acid) (Phosphinothioic acid)

PUDOVIK, A.N.; KONOVALOVA, I.V.

Reactions of vinyl acetate with partial esters of phosphorus acids. Zhur.ob.khim. 32 no.2:467-471 F '62. (MIRA 15:2)
(Vinyl acetate)
(Phosphorus acids)

PUDOVIK, A.N.; KONOVALOVA, I.V.

Regrouping of methyl-di-(diethylphosphone)-carbinol. Dokl.
AN SSSR 143 no.4:875-878 Ap '62. (MIRA 15:3)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina. Predstavлено akademikom B.A.Arbusovym.
(Phosphinic acid) (Phosphorus acids)

FUDOVIK, A. N.; KONOVALOVA, I. V.

Interaction of carboxyl chloride and carboxylic anhydrides
with sodium diethyl phosphite. Zhur. ob. khim. 33 no.1:
98-102 '63.
(MIRA 16:1)

1. Kazanskiy gosudarstvennyy universitet.

(Acids, Organic) (Phosphorous acid)

PUDOVIK, A.N.; KONOVALOVA, I.V.; DEDOVA, L.V.

Rearrangement of esters of hydroxymethyl (diethylphosphone)
acetic acid. Zhur.ob.khim. 32 no.2:483-486 F '63. (MIRA 16:2)

1. Kazanskiy gosudarstvennyy universitet.
(Acetic acid) (Rearrangements (Chemistry))

PUDOVIK, A.N.; KONOVALOVA, I.V.

Synthesis of styrene and its homologs by pyrolysis of phosphates.
Dokl. AN SSSR 149 no.5:1091-1094 Ap '63. (MIRA 16:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.
Predstavлено академиком B.A.Arbusovym.
(Styrene) (Phosphates)

PUDOVIK, A.N.; KONOVALOVA, I.V.; ISHMAYEVA, E.A.

Reactions of the diene synthesis and addition of butadienephosphinic
and butadienethiophosphinic esters. Zhur. ob. khim. 33 no.8:
2509-2513 Ag '63. (MIRA 16:11)

1. Kazanskiy gosudarstvennyy universitet.

PUDOVIK, A.N.; KONOVALOVA, I.V.

Transformations of allylphosphinic esters in the presence of
sodium ethylate. Zhur.ob.khim. 33 no.10:3442-3443 O '63.

1. Kazanskiy gosudarstvennyy universitet. (MIRA 16:11)

PUDOVIK, A.N.; KONOVALOVA, I.V.; DEDOVA, L.V.

Rearrangement of α -oxyphosphinic and α -oxythiophosphinic esters to phosphinates and thiophosphates. Dokl. AN SSSR 153 no. 3:616-618 N '63. (MIRA 17:1)

I. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Predstavлено akademikom B.A. Arbuzovym.

L 18279-65 EMT(m)/EPF(c)/EWP(j) Pe-4/Pr-4 RM

ACCESSION NR: AP5002985

S/0079/64/034/009/2902/2905

B

AUTHOR: Pudovik, A. N.; Konovalova, I. V.; Dedova, L. V.

TITLE: Reaction of dialkylthiophosphorus acids with certain carbonyl-containing compounds

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2902-2905

TCPIG TAGS: organic phosphorus compound, ester, acetic acid

Abstract: Reactions of dialkylthiophosphorous acids with carbonyl compounds were studied as a comparison with previous studies of the reactions of dialkylphosphorous acids with acetophosphinic and pyruvic esters and acetophenone in the presence of an alkaline catalyst, which were accompanied by rearrangement of the alpha-hydroxyalkylphosphinic esters formed in the first step to phosphates; this study was aimed at determining the influence of replacement of the phosphinic group by the less electronegative thiophosphinic group on these reactions. The esters of alpha-hydroxy-alpha-methyl (dialkylthiophosphone) acetic, alpha-hydroxy(alpha-diethylthiophosphone) phosphinic, and alpha-hydroxy-alpha-acetoethylthiophosphinic acids formed in the addition of dialkylthiophosphorous acids to the ethyl ester of pyruvic acid, acetophosphinic ester, and diacetyl in the presence of sodium alcoholate.

Card 1/2

L 18279-65

ACCESSION NR: AP5002985

are rearranged during the reaction to dialkyl(alpha-carbethoxyethyl) thiosphosphates, diethyl(alpha-diethylthiophosphone)ethyl phosphate, and diethyl-alpha-acetoethyl thiophosphate. In the reaction of diethylthio-phosphorous acid with acetophenone, the diethyl ester of alpha-hydroxy-alpha-phenylethylphosphinic acid was formed in only a small yield, most of it decomposing to the starting materials upon distillation. It was concluded that replacement of the phosphinic group by the thiophosphinic group, exhibiting a smaller induction effect as a result of the lower electronegativity of sulfur in comparison with oxygen, exerts a substantial influence on the ability of alpha-hydroxythiophosphinic esters for rearrangement. Orig. art. has 7 formulas and 1 table.

ASSOCIATION: Krasnakiy gosudarstvennyy universitet (Kazan' State University)

SUBMITTED: 01Jul63

ENCL: 00

SUB CODE: CC, GC

NO REF Sov: 005

OTHER: 000

JPRS

Card 2/2

PUDOVIK, A.N.; KONOVALOVA, I.V.; DEDOVA, L.V.

Reactions of dialkylphosphothious acids with some carbonyl-containing compounds. Zhur. ob. khim. 34 no.9:2902-2905
S '64.

Interaction of phosphinic acid ethers with pyruvic ester and acetophenone. Ibid.:2905-2907
(MIRA 17:11)

1. Kazanskiy gosudarstvennyy universitet.

L 18277-65 ENT(m)/EPF(c)/EXP(j) Pe-4/Pr-4/Pa-4 RM

ACCESSION NR: AP5002986

S/0079/64/034/009/2905/2907

AUTHORS: Pudovik, A. N.; Konovalova, I. V.; Dedova, L. V.

TITLE: Reaction of incomplete esters of phosphinous acids with pyruvic ester and acetophenone ^B

SOURCE: Zhurnal obshchey khimii, v. 34, no. 9, 1964, 2905-2907

TOPIC TAGS: ester, phosphinic acid, pyrolysis, polystyrene

Abstract: The addition of incomplete esters of ethylphosphinous acid to the ethyl ester of pyruvic acid and acetophenone in the presence of sodium alcoholate was studied. The alkyl esters of ethyl-alpha-hydroxy-alpha-carbethoxyethylphosphinic and (alpha-hydroxy-alpha-phenylethyl) ethylphosphinic acids formed were found to be rearranged during the reaction to alpha-carbethoxyethylalkyl and alpha-phenylethylalkyl esters of ethylphosphinic acid. Pyrolysis of the (alpha-phenylethyl)ethyl ester of ethylphosphinous acid at 170° at a residual pressure of 25 mm resulted in the formation of styrene in 76% yield. Orig. art. has 7 formulas and 1 table.

ASSOCIATION: Kazanskiy gosudarstvenny universitet (Kazan' State University)

SUBMITTED: 01Jul63

ENCL: 00

SUB CODE: OC, GC

NO REF SCV: C2

OTHER: 000

JPRS

Card 1/1

L 38293-65 EPF(c)/EXP(j)/EWT(m) PC-4/Pr-4 RM

ATOMIC

UDC 547.555.1/2.111:539.2'724.2

Sivik, A. N.; Konovalova, I. V.

REACTION OF TRIALKYL PHOSPHITES WITH ESTERS OF PYROGLUTAMIC AND MESOXALIC ACIDS

Zhuravly Chemii, v. 24, no. 11, 1973, p. 2201.

organic phosphorus compound, ester, thermochemistry

Reaction of trialkyl phosphites with esters of pyroglutamic and mesoxalic acids found to proceed in two directions at different temperatures.

One or two molecules of ester react with one molecule of alkyl-phthaloxoxyethyl phosphite.

The trialkyl phosphites react with esters of mesoxalic acid forming 1,3-dioxaphosphoranes.

Alkyl-phthaloxoxyethyl phosphites were found to react with esters of pyroglutamic acid forming 1,3,2-dioxaphosphoranes.

Alkyl-phthaloxoxyethyl phosphites were found to react with esters of mesoxalic acid forming dialkyl-alpha, alpha-dioxaphosphoranes.

Formation of cyclic compounds of the dioxaphosphorane type was theorized.

* orig. art. has 2 formulas.

PUDOVIK, A.N.; KONOVALOVA, I.V.; BANDEROVA, L.V.

Reaction of phosphorus ester acids with ethyl mesoxalate.
Zhur. ob. khim. 35 no.7:1206-1209 J1 '65. (MIRA 18:8)

1. Kazanskiy gosudarstvennyy universitet.

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

PUDOVIK, A.N.; KONVALOVA, I.V.

Reactions of esters of trivalent phosphorus acids with esters
of pyruvic acid. Zhur. ob. khim. 35 no.9, 1591-1595 S '65.
(MIRA 18:10)
1. Kazanskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

L 25597-66 EWT(m)/EWP(j) 24

ACC NR: AP6016693

SOURCE CODE: UR/0079/65/035/009/1591/1595

AUTHOR: Pudovik, A. N.; Konovalova, I. V.

28
B

ORG: Kazan' State University (Kazanskiy gosudarstvenny universitet)

TITLE: Reactions of complete esters of acids of trivalent phosphorus with esters
of pyruvic acid

SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1591-1595

TOPIC TAGS: ester, phosphate, organic phosphorus compound

ABSTRACT: The reactions of the methyl and ethyl esters of pyruvic acid with trimethyl and triethyl phosphites were found to depend greatly on the reaction conditions. Under mild conditions (-10 to 0°), high-boiling products (2,2,2-trialkoxy-4,5-dimethyl-4,5-dicarbalkoxy-1,3,2-dioxaphospholanes) were formed in 70-80% yield, along with only very negligible amounts of low-boiling compounds. Under more rigorous conditions, at 100°, the reaction of trialkyl phosphites with pyruvic esters was found to proceed in two directions -- forming up to 30% low-boiling products (dialkyl-alpha-alkyl-alpha-carbalkoxy-ethyl phosphates) and only 40% of the 1,3,2-dioxaphospholanes. A reaction mechanism is proposed, involving attack of phosphite on the electrophilic carbon atom of the carbonyl group of pyruvic ester, with intramolecular rearrangement of the bipolar ion, followed by stabilization of the ion formed in two ways. 2,2-Diethoxy-2-ethyl-4,5-dimethyl-4,5-dicarbalkoxy-1,3,2-dioxa-

Card 1/2

UDC: 547.26'118

L 22297-66

ACC NR: AP6016693

phospholanes were produced by the reaction of the diethyl ester of ethyl-phosphinous acid with the methyl and ethyl esters of pyruvic acid under mild conditions. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 11Jan64 / ORIG REF: 001 / OTH REF: 001

Card 2/2 H/

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KONOVALOVA, I.Z.

Computation of perpetual current tables. Trudy GOIN no.61:132-
141 '61. (MIRA 14:10)
(Tides—Tables)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

BURYKH, Ye.B.; KOLOBOV, V.M.; SKOTNIKOV, Yu.A.; TIKHONOVICH, S.S.;
SHIMOVALOV, T.I.; KONOVALOVA, K.A., redaktor; RODIONOV, Yu.,
redaktor; LIL'YE, A., ~~tekhnicheskiy~~ redaktor

[Memorable places in Moscow Province] Pamiatnye mesta Moskovskoi
oblasti; kratkii puteshchestv. Izd. 2-e, dop. i perer. Sost. E.B.
Burykh i dr. [Moskva] Moskovskii rabochii, 1956. 606 p. (MLRA 9:7)

1. Moscow. Oblastnoy krayevedcheskiy musey. 2. Zamestitel' pred-
sedatelya Moskovskogo oblastnogo obshchestva krayevedeniya (for
Konovalova)

(Moscow Province--Historic houses, etc.)

BURYKH, Ye.B.; D'YAKONOV, M.V.; KOLOBOVA, M.I. [deceased]; KOLOBOV, V.M.;
KONOVALOVA, K.A.; POPAIINSKYIN, V.I.; SKOTNIKOV, Yu.A.; TIKHONOVICH,
S.S.; SHIROVALOV, T.I. Prinimali uchastiye YUN'IEVA, N.P.;
POLYAK, Ye.V.; SULTANOVA, N., red.; YAKOVLEVA, Ye., tekhn.red.

[Memorable places in Moscow Province; a concise guidebook] Pa-
miatnye mesta Moskovskoi oblasti; kratkii putesvoditel'. Izd.3.,
dop. i perer. Sost. E.B. Burykh i dr. Moskva, Mosk.rebochii, 1960.
734 p. (MIRA 14:2)

1. Moscow. Oblastnoy krayevedcheskiy muzey. 2. Zamestitel' predse-
datelya Moskovskogo oblastnogo obshchestva krayevedeniya (for
Konovalova).

(Moscow Province--Guidebooks)

MELKAYA, Ye.N.; KONOVALOVA, K.I.; GORDON, L.V.; SKVORTSOV, S.O.

Means for increasing production of furfurole oils in wood chemistry
plants. Gidroliz. i lesokhim.prom. 11 no.8:20-21 '58.
(MIRA 11:12)

1. Syavskiy lesokhimicheskiy kombinat (for Melkaya, Konovalova).
2. Tsentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut
(for Gordon, Skvortsov).
(Furaldehyde)

AUTHOR: SHOHERBOV,D.P., KONOVALOVA,K.M. 32-6-8/54
TITLE: On the Colorimetric Determination of the Content of Mercury in
Mercury- and Copper Diiodide. (O kolorimetricheskom opredelenii
rtuti v vide dvoynogo iodida rtuti i medi, Russian)
PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 663-665 (U.S.S.R.)

ABSTRACT: It is shown in this paper that on the occasion of the examination of the colorimetrical method for the determination of the mercury content (according to D.N.FINKELESTEIN and Mme. PIETROPAVLOVSKAYA) results were obtained that were lower than those obtained by titration with rodanide or by the distillation method (according to F.A.FYER YANCHICH). The copper iodide suspension used on this occasion was not dense enough, and discolored mercury silver diiodide and copper were precipitated too rapidly, so that comparison of the colorings of the solutions was rendered difficult. According to the method mentioned the iodide concentrations in the samples ought to have agreed with those in the standard scale, but in reality this was not the case. Two scales were worked out on the basis of the results obtained: A - with 0,2% J with a 2,0 KJ solution, and B - with an addition of 1 ml. 1% - iodine solution, i.e. with a final concentration of 0,36% J. The solutions of scale B were then colorimetrized according to the scale A, and solutions of scale A were

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"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

GUREVICH, E.I., inzh.; KONOVALOVA, K.N., inzh.; MYSHENKOVA, N.K., inzh.;
SENCHUGOV, K.I., inzh.; SIMO, I.N., inzh.

Study of the TVF-100-2 trubogenerators manufactured by the
"Elektrosila" factory. Elek. sta. 35 no.12:25-28 D '64.
(MIRA 18:2)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

KONOVALOVA, L. A.

Chemical Abst.
Vol. 49 No. 6
Mar. 25, 1954
General and Physical Chemistry

Temperature relationship of the density of heptamethyl-

nonane and methylidicyclopentylcyclohexane. G. D. Gal-

pern, L. A. Konovalova, and M. M. Kusakov. Trudy

Vuz. Neft. Akad. Nauk S.S.R. 1, No. 2, 217-22 (1950).⁽⁴⁾

An accurate method of detn. of the d. of liquid hydrocarbons
with dilatometric pycnometers. Ds. of heptane, butyl-
benzene, heptamethylnonane, and methylidicyclopentyl-
cyclohexane were found to change linearly between -60°
and +20°. Empirical equations were developed to express
changes in ds. with the temp. W. M. Sternberg

9-16-5240
Jug. P

perny

(3) 6

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
General and Physical Chemistry

Temperature relations of index of refraction and diffraction of liquid hydrocarbons at low temperatures. (G. D. Gal'perin, L. A. Konovalova, and M. M. Kusakov. *Trudy Inst. Nefte Akad. Nauk S.S.R.*, No. 2, 223-231, 1950).—Obreimov's method (*C.A.* 39, 1585^a) was used, based on the diffraction max. and min. at the boundary of a liquid/glass plate, resulting from the interference of 2 branches of a monochromatic light ray, one of which passes through the liquid, and the other through the plate. The *ns* and diffraction of heptamethylionane, methylidicyclopentylcyclohexane, and butylbenzene changed linearly between +20 and -60°. With a sufficiently high-grade monochromator permitting the isolation of a 2-A. spectrum range, and a sufficiently great range of standard glasses, changes in the *n* can be detd. with a high degree of accuracy in the app. used; the accuracy of the measurements was within ±0.0001. The sp. refraction calcd. by the Lorentz-Lorenz formula is a function of the temp., and is lower at lower temps.

W. M. Sternberg

Sternberg

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

KONOVALOVA, L. A.

AUTHOR: Kusakov, M.M., Konovalova L.A. and Avdeyeva, V.I.
TITLE: The influence of pressure on the viscosity of solutions of some silicon-organic liquids in a mineral oil. (Vliyaniye davleniya na vyazkost' rastvorov nekotorykh kremniyorganicheskikh zhidkostey v mineral'nom masle.) ^{65-4-6/12}

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants) 1957, No. 4, pp. 38-41 (USSR)

ABSTRACT: The dependence of the viscosity of some solutions of polysiloxanes in a mineral oil on pressure at various temperatures was investigated. The viscosity measurements at pressures up to 3 000 kg/cm² and temperatures from 10 to 50 °C were carried out in a high pressure viscosimeter based on the principle of falling sphere (14,6). The dependence of the relative viscosity of oil AY, ethylpolysiloxane liquid and their mixtures on pressure is shown in Fig. 1., isobars of the concentration - relative viscosity relationship, in Figs. 2-4. The influence of some individual liquids with siloxane links (bis-pentaalkyl-disilane-methaneoxides with various radicals, from CH₃ to C₄H₉) on the viscosity of oil AY under the same pressures and temperatures was studied in some detail. Comparatively small concentrations (up to 0.5 mol/l 000) of the above compounds dissolved in AY oil decrease the relative

Card 1/2

KONOVALOVA, L. A.

5(3) 21(b) PAGE 1 BOOK IMPRESSIONS 057/2023

Academy and USSR. Institute series.

Study, t. 12 (Transactions of the Petroleum Institute, USSR). Academy of Sciences, Vol. 12) Moscow, 1st-vo Akademi, 1956. 395 p. Errata 3139. Issued. 1,700 copies printed.

Nal. S. S. Dergyain, Professor; Ed. of Publishing House: K. G.

Reynovskiy, Prof. Ed.; V. V. Golubev.

INTROD.: The book is intended for scientists, engineers, and technicians in the petroleum industry.

CONTENTS: This collection of articles describes the results of studies on the chemistry and technology of petroleum and gas conducted in the laboratories of the Petroleum Institute, Academy of Sciences, USSR, in 1956 and 1957. A new section "Petroleum Synthesis and Technology" has been included in the collection of articles. A 12th issue of the journal has been included in the collection of the Institute's publications. Published by the publishers of the Institute in 1956 and 1957 and a list of descriptions for the Doctor's and Candidate's theses presented in 1956 and 1957 at open sessions of the Academic Councils of the Petroleum Institute, Academy of Sciences, USSR, are given. N. N. Ishakov, P. V. Korshunov, I. A. Narayev, and V. V. Shchekin. Change in the Activity of Bitumen Oil in the Catalytic Refining of Hydrocarbons

35

V. ACTIVITIES OF VARIOUS INSTITUTES

Mashkov, N. M., V. A. Korobkov, and V. I. Andreeva. Effect of Pressure on Viscosity and Structure Formation of Lubricating Oils 339

Tsvetov, F. A., and N. A. Belitskiy. The Role of Microtissues in Self-Combustion of a Mixture of Diethylpentadiene and Nitric Acid. Report I 354

Sartor, P. A., V. M. Andrianyan. Some Problems in the Economics of Petroleum Refining 363

Baranov, E. S. (preceed)

Dissertations presented at sessions of the Academic Council of the Petroleum Institute, Academy of Sciences, USSR, in 1956 and 1957 373

Investigations on the Chemistry and Technology of Petroleum and Gas 375

carried out at the Petroleum Institute, Academy of Sciences, USSR, and published in 1956-1957 376

Papers not included in the bibliography of Vol. I of "Study Institute 391

30(3)"

AVAILABLE: Library of Congress

KONOVALOVA, L.A.

PHASE I BOOK EXPLOITATION

SOV/5055

Vsesoruznaya konferentsiya po tret'yu i iznosu v zashinakh. 3d.
1958.

Otdrochnomoshchekam teorii smarzki. Opyry skol'zheniya. Smarzka i srazochnye materialy (Hydrodynamic Theory of Lubrication. Slip Bearings and Lubricant Materials) Moscow. Izd-vo M. SSSR. 422 p. Errata slip inserted. 3,800 copies printed. (series: 1st. Trudy, v. 3.)

Sponsoring Agency: Akademiya Nauk SSSR. Institut mashinovedeniya. Rep. Eds. for the Section of Hydrodynamic Theory of Lubrication and Slip Bearings: Ye. M. Gut'yayr, Professor; Doctor of Technical Sciences; and A. M. Dyachkov, Professor; Doctor of Technical Sciences; Rep. Ed. for the Section of Lubrication and Lubricant Materials: O. V. Vinogradov, Professor; Doctor of Chemical Sciences; Ed. of Publishing House: M. Ya. Klebanov; Tech. Ed.: O. M. Gus'stova.

PURPOSE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection published by the Institut mashinovedeniya Akademii SSSR (Institute of Machines Academy of Sciences USSR) contains papers presented at the III Vsesoruznaya konferentsiya po tret'yu i iznosu v zashinakh (Third All-Union Conference on Friction and Wear of Machines) which was held April 9-15, 1958. Problems discussed were in hydrodynamic theory of lubrication and tribology.

Hydrodynamic Theory (Cont.)

Podol'skii, Yu. Ya. Machine for Testing Wear-Resistant and Antiwear Properties of Lubricant Materials for High Contact Stresses and Sliding Speeds 227

Sanin, P. I., Ye. S. Shapovalov, A. V. Ulyanova, and S. V. Klymenko. Effect of Synthetic Additives to Lubricating Oil on Frictional Wear 234

Turikont, I. G. Application of the Results of Wear-Measuring Tests of Lubricating Oils on Machines With Point Contact of the Friction Surfaces 219

Volumetric Mechanical Properties of Lubricant Materials

Vol'pertikh, D. S. (deceased), E. I. Karaban, and O. D. Bandarenkova. Viscous Properties of Oil Mixtures of Different Chemical Character and of Solid Lubricants Observed by Thickening 248

Vol'pertikh, M. P. and V. F. Yal'yanov. Investigation of the Viscous Properties of Lubricating Oils with High-Polymer Additives at Low Temperatures 256

Wasakov, M. M., L. A. Kononovich, Ye. A. Prokof'yeva, and V. I. Sidorenko. Effect of Temperature, Pressure, and Friction on the Viscosity of Mixtures of Mineral Oils and Silico-organic Liquids 262

Mashchanikov, S. N. Practical Significance of Some Laboratory Parameters of the Mechanical Properties of Plastic Lubricants 270

Pavlov, V. P. Effects of Heat on the Flow of Plastic Lubricants 277

Sinitsyna, N. V. Boundary-Layer Sliding and Internal Friction of Plastic Lubricants 284

8/081/61/000/014/026/030
B105/B202

AUTHORS: Kusakov M. M., Konovalova L. A., Prokof'yeva Ye. A.,
Sidorenko V. I.

TITLE: Effect of temperature and pressure on the viscosity of
mixtures of mineral oils and organosilicon liquids

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1961, 543,
abstract 14M249 (Tr. 3-y Vses. konferentsii po treniyu
i iznosu v mashinakh. M., AN SSSR, v. 3, 1960, 262 - 270)

TEXT: The authors present experimental data on the viscosity of the
solutions of polysiloxane liquids (PL) in mineral oils at atmospheric
pressure and in the temperature interval of -50 to +60°C as well as at
pressures of up to 3000 kg/cm² in the temperature interval of from +10 to
+50°C. The viscosity measurements (dynamic) at atmospheric pressure and
at different temperatures were made by means of the capillary viscosimeter
of the type Ubbelohde and at high pressures by means of the falling-sphere
viscosimeter. The components of the mixture were mineral oils MVP and the
spindle oil AU as well as ethyl- and butyl polysiloxane liquids. The
Card 1/3 ✓

S/081/61/000/014/026/030
B105/B202

Effect of temperature and pressure ...

authors give temperature curves of the viscosity of the oils MVP, AU and of three PL. An addition of PL to the oils MVP and AU improves the temperature curve of their viscosity by increasing its slope in the field of low temperatures. With simultaneous addition of PL and high-molecular thickeners to the oil, the effect of PL mainly causes an increase of the temperature slope of the viscosity temperature curve; the effect of the thickener leads to an increase of the viscosity level. The effect of PL and the thickener becomes manifest independently. For all temperatures investigated the effect of PL is the stronger the higher the pressure. The results of the study of the piezometric dependence of the viscosity of the mixture of mineral oil and PL showed that the viscosity of the mixtures at given pressure is no additive property. The deviation of the viscosity isobars from the linearity increases with increasing pressure and with increasing difference in the piezometric coefficients of viscosity of the oil and PL. With increasing pressure and at a certain ratio of the components, the viscosity isobars of the mixtures show a certain minimum. With addition of various commercial PL to the oils, the Card 2/3

S/081/61/000/014/026/030
B105/B202

Effect of temperature and pressure ...

character of the change of the relative viscosity depends on pressure and temperature. In this case relative viscosity decreases with increasing PL content in the mixture. With increasing concentration of PL in the mineral oil the piezocoefficient of viscosity decreases. [Abstracter's note: Complete translation.]

✓

Card 3/3

KONOVALOVA, L.A., inzh.

Discharge delay in a regulated arc gap with a gas generating igniting device. Izv. vys. ucheb. zav.; energ. 6 no.8:110-114 Ag '63.
(MIRA 16:9)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.
(Electric switchgear—Testing)
(Electric discharges)

ACCESSION NR: AR4036338

S/0169/64/000/003/B072/B072

SOURCE: Referativnyy zhurnal. Geofizika, Abs. 3B465

AUTHOR: Isherskaya, Ye. V.; Konovalova, L. A.

TITLE: Microclimate of a river valley of the Volga slope of the Volga Highlands

CITED SOURCE: Sb. Materialy 1-go Nauchno-tekh. soveshchaniya po izuch. Kuyby*shevsk. vodokhranilishcha. Vy*p. 2. Kuyby*shev, 1963, 71-80

TOPIC TAGS: climate, microclimate, microclimate survey, atmospheric surface layer, atmospheric temperature gradient, atmospheric temperature, atmospheric humidity

TRANSLATION: A microclimatic survey was made using an automobile which carried an automatic meteorograph which recorded air temperature and humidity in the surface layer. The study discusses the microclimatic indices of the following relief features: a) the lower surface of the Volga Highlands on drainage divides; b) plateau slopes of different degree of dissection and exposure descending to the valleys; c) the Khazarskaya terrace of the valleys; d) the Khvalynskaya

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ACCESSION NR: AR4036338

terrace; and e) the recent floodplain terrace. At nighttime, in the predawn hours, the air temperature distribution in the surface layer conforms to the topographic profile. The valleys are 2-3° colder than the plateau. Within a valley there is smoothing of the microclimatic differences. The vertical temperature gradient in the layer of the first 50 meters from the surface of the soil is close to zero. On valley slopes temperature increases with height; the vertical temperature gradient is $-5 - -6^{\circ}/100\text{ m}$. On the plateau temperature variations do not exceed 1° . The distribution of relative humidity conforms to the topographic profile, but has an opposite sign in comparison to the temperature distribution. In the valleys the relative humidity is 20% (sometimes 50%) higher than on the plateau. In the evening the cooling of valleys and the formation of inversions in the valleys begins immediately after sunset; in the first hours of the night the terraces above the floodplains are warmer than the floodplains. The frosts on the terraces above the floodplains are of shorter duration than on the floodplains. In the evening hours, even before the onset of a temperature change, there is a sharp increase of humidity in topographic depressions. This can be

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ACCESSION NR: AR4036338

attributed to the fact that moisture exchange is difficult when an inversion is forming over the floodplain. During the daytime hours the distribution of temperature and humidity is uniform and has little dependence on the form of relief. There is no temperature increase in topographic depressions, which can be attributed to a considerable vertical heat exchange. In the absence of a daytime increase of temperatures and with considerable nighttime cooling in the valleys the sums of active temperatures in the growing season are greater than on open plateaus. M. Geradzha.

DATE ACQ: 17Apr64

SUB CODE: AS

ENCL: 00

Card 3/3

KUSAKOV, M.M.; KONOVALOVA, L.A.; KONSTANTINOV, A.A.

High-pressure rotary viscosimeter for small amounts of liquid.
Inzh.-fiz. zhur. 7 no. 3:27-33 Mr '64. (MJRA 17:5)

1. Institut neftekhimicheskogo sinteza AN SSSR, Moskva.

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

ROGOZHIN, L. F.

KONOMOGLIA, L. F. -- "Biological Characteristics of Perch as a Component of Lake Ichthyofauna." Sub 7 Jan 53, Moscow Technical Inst. of the Fish Industry and Economy imeni A. I. Mikoyan. (Dissertation for the Degree of Candidate in Biological Sciences).

SO: Verchernaya Moskva January-December 1952

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KONOVALOVA, L.F.

Characteristics of the biology of propagation of perch. Trudy Biol.
sta. "Borok" no.2:266-277 '55. (MLRA 9:6)
(Perch)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

KONOVALOVA, L.I.

Some results of the adoption of the new technology in fabric finishing. Izv. vys.ucheb.zav.; tekhn.tekst.prom. no.6:140-141 '61.
(MIRA 19:1)

1. Ivanovskiy khlopcchatobumazhnnyy kombinat.
(Cotton finishing)

PROROKOV, N.I.; KONOVALOVA, L.I.; KUDRYASHOVA, A.A.

Experience in the use of the new methods for fabric finishing.
Tekst. prom. 24 no. 3: 58-61 Mr '64. (MIRA 17:9)

1. Direktor Ivanovskogo khlopchatobumazhnogo kombinata imeni F.N. Samoylova (for Prorokov). 2. Zaveduyushchiy khimicheskoy laboratoriyyey Ivanovskogo khlopchatobumazhnogo kombinata (for Konovalova). 3. Nachal'nik optychno-proizvodstvennoy laboratorii Ivanovskogo khlopchatobumazhnogo kombinata (for Kudryashova).

NOVIKOV, A.G.; KONOVALOVA, L.I.; FADEYEVA, T.M.

Continuous dyeing with insoluble azo dyes with partial drying
of the fabric after "azotolation." Tekst.prom. 25 no.11:69-
70 N '65. (MIRA 18:12)

1. Glavnnyy inzhener Ivanovskogo khlopchatobumazhnogo kombinata
imeni Samoylova (for Novikov). 2. Zaveduyushchiy khimicheskoy
laboratoriyye Ivanovskogo khlopchatobumazhnogo kombinata imeni
Samoylova (for Konovalova). 3. Starshiy inzhener-khimik Ivanov-
skogo khlopchatobumazhnogo kombinata imeni Samoylova (for Fadeyeva).

5.3610

77394
SOV/79-30-1-55/78

AUTHORS: Konovalova, L. L. Ust'-Kachkintsev, V. F.

TITLE: Concerning the Reaction Between Thiocyanate Esters and Amines

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 246-250 (USSR)

ABSTRACT: Reaction between ethyl thiocyanate and aniline, piperidine, and dimethylaniline was studied by measuring the densities, viscosities, and electrical conductivities of the mixtures of ethyl thiocyanate with amines. The results of the measurements are given in Figs. 1, 2, 3, 4, 5, and 6.

Card 1/5

Concerning the Reaction Between Thiocyanate Esters and Amines

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SOV/79-30-1-55/78

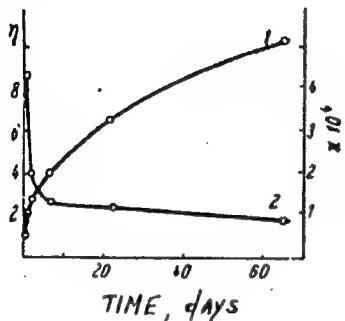


Fig. 1. Change in viscosity (1) and electrical conductivity (2) of a 50% mixture of ethyl thiocyanate with piperidine with time, at 25°.

Card 2/5

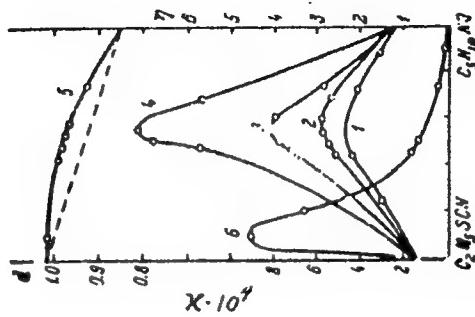


Fig. 2. System ethyl thiocyanate--piperidine, at 25°.
(1-4) Viscosity after 1, 2, 7, 20 days; (5) density after 1 day; (6) electrical conductivity after 1 day.

Concerning the Reaction Between Thiocyanate Esters and Amines

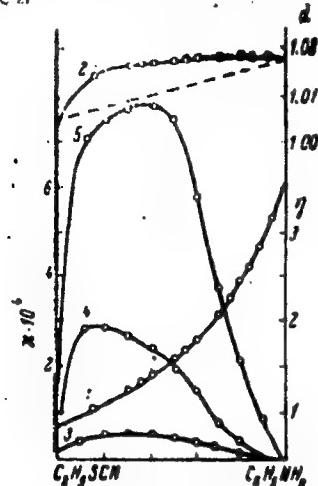


Fig. 3. System ethyl thiocyanate--aniline, at 25°. (1) Viscosity after 1 day; (2) density after 1 day; (3-5) electrical conductivity after 1, 15, 140 days.

Card 3/5

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SOV/79-30-1-55/78

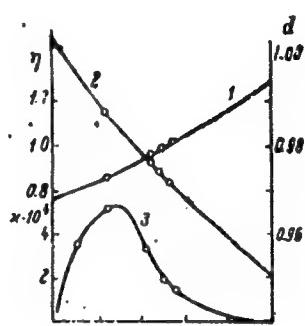


Fig. 4. System ethyl thiocyanate--dimethylaniline, at 25°. (1) Viscosity; (2) density; (3) electrical conductivity after 8 months.

Concerning the Reaction Between Thiocyanate Esters and Amines

77394
SOV/79-30-1-55/78

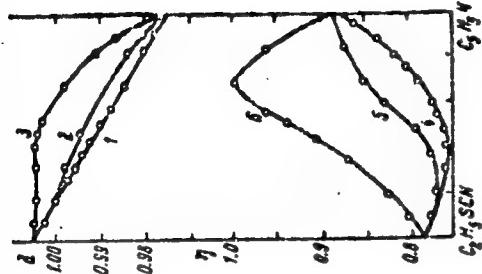


Fig. 5. System ethyl thiocyanate--pyridine, at 25°. (1-3) Densities after 1 day, 2 months, 1.5 years; (4-6) viscosity after 1 day, 2 months, 1.5 years. Card 4/5

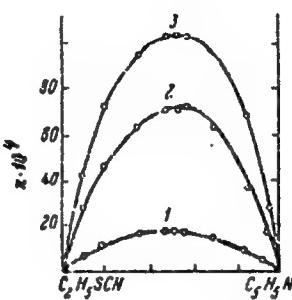


Fig. 6. Electrical conductivity of the mixture: ethyl thiocyanate--pyridine. (1,2) After 2 months and 1.5 years, at 25°; after 1.5 years at 50°.

S/137/62/000/005/091/150
A006/A101

AUTHOR: Konovalova, L. L.

TITLE: Changes in the mechanical properties of steel during its polarization
in some non-aqueous solutions

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 53, abstract 5I310
("Uch zap. Permsk. un-t", 1961, v. 19, no. 1, 51 - 54)

TEXT: The author studied changes in the rupture strength of a steel wire
after cathodic polarization in water-alcohol, water-glycerin and water-dioxane
solutions of 0.1 n. H_2SO_4 and in mixtures of CH_3COOH with aniline. In polariza-
tion of steel in pure H_2SO_4 solutions its rupture strength changes slightly, in-
dependent of the solvent composition. The introduction of a hydrogenation
catalyst (Se dioxide) reduces the rupture strength of the steel. However, the
effect of Se compounds is weaker than that of aqueous solutions. In mixtures
of CH_3COOH with aniline, hydrogenation of the wire grows with increasing rela-
tive concentration of aniline.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 1/1

FROL'TSOVA, A.Ye.; ASTAF'YEV, B.A.; KONOVALOVA, I.M.

Search for specific trichinelliasis therapy. Report No.18
Acrichine, chlorophos, monomycin and a growth-promoting
substance of petroleum origin in experimental trichinelliasis
of rats. Med. parazit. bol. 34 no.4:387-389. Jl-Ag '65.
(MIR 18:12)

1. Klinicheskiy otdel i laboratoriya biologii gel'mintov
i spetsificheskogo deystviya preparatov Instituta meditsinskoy
parazitologii i tropicheskoy meditsiny imeni Ye.I.Martsinov-
skogo Ministerstva zdravookhraneniya SSSR, Moskva. Submitted
March 21, 1965.

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KONOVALOVA, L.N.

TERENT'YEV, V.M.; STASENKO, N.N.; KONOVALOVA, L.N.

Some specific features of the growth and development of cereal plants
on peat soils. Biul. Inst. Biol. AN BSSR no.2:94-99 '57. (MIRA 11:2)
(Grain) (Peat soils)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KOZKO, A.I., inzh.; KONOVALOVA, L.N., inzh.

Results of investigating exchange samples of coal by the method of
international classification. Obog. i brik. ugl. no.11:16-23 '59.
(MIRA 13:6)

(Coal--Grading)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KOZKO, A.I., inzh.; KONOVALOVA, L.N., inzh.; Prinimali uchastiye: RYUKINA,
A.A.; PONOMAREVA, L.A.; GIREVA, L.M.

Comparative evaluation of methods for determining the coking
capacity of coals. Obog.i brik.ugl. no.14:47-76 '60.

(MIRA 14:5)

(Coal—Testing)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KOZKO, A.I., inzh.; KONOVALOVA, I.N., inzh.

Results of the testing of coal samples of the U.S.S.R. and of the
countries of People's Democracies by means of the methods of
international classification. Obog.i brik.ugl. no.15:58-
61 '60. (MIRA 14:12)

(Coal..Testing)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

TERENT'YEV, V.M.; KONOVALOVA, L.N.

Effect of the moisture regime of peat soils on the formation of substances composing the mechanical tissues of plants. Dokl. AN BSSR 5 no.11:511-514 N '61. (MIRA 15:1)

1. Predstavleno akademikom AN BSSR T.N.Godnevym.
(Plants--Water requirements) (Lignin) (Cellulose)

KONOVALO A, L. P.

KONOVALOVA, L. P.: "Alcoholization of the diaphragmal nerve in young and preschool children in primary and tubercular pneumonia." Acad Med Sci USSR. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences.)

Source: Knizhnaya letopis' No 40 1956 Moscow

KONOVALOVA, L.P.; OKHRIMENKO, L.S.; STRUGAL'SKIY, Z.S.

Determining the energy of gamma-ray quanta in a xenon bubble chamber. Prib. i tekhn.eksp. 6 no.6:26-31 N-D '61.

(MIRA 14:11)

1. Ob"yedinennyj institut yadernykh issledovaniy. 2. Institut yadernykh issledovaniy, Varshava (for Strugal'skiy).

{Bubble chamber)
(Gamma rays)

KONOVALOVA, L. V.

Dissertation defended for the degree of Candidate of Philosophical Sciences
at the Institute of Philosophy (1962)

"Category of Duty in Marxist-Leninist Epochs."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KONOVALOVA, M.; ZVIYEDRIS, D. [Zviedris, D.]

Effect of hydrogen sulfide baths on the peripheral and cerebral blood circulation in hypotension. Vestis Latv ak no.3:97-104 '62.

1. Institut eksperimental'noy i klinicheskoy meditsiny AN Latviyskoy SSR.

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

RUDAKOV, A.G.; OGURTSOV, K.I.; KONOVALOVA, M.A.

Dynamic characteristics of direct waves in finely stratified
structures (shales). Vop.din.teor.raspr.seism.voln. no.2:
133-156 '59. (MIRA 1):5)
(Seismometry)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

Properties of O-peptides of β -hydroxyamino acids. Reaction of ammonolysis and amidolysis. M. M. Horvinik, S. M. Avaeva, M. I. Konovalova, and V. N. Ostrovalskaya (State Univ., Moscow). Zhur. Otschete Khim. 27, 1910-16 (1957); cf. C.A. 48, 8729z; 13628j; 51, 4940c. -- Benzoylserine (4.7 g.) in dry dioxane treated with the HCl salt of 2-phenyl-4-(sopropylxazolone) prep'd. from 4.8 g. benzoylvaline, stirred, kept overnight, and heated 8 hrs. at 50-5° yielded 66% O-benzoylalanyl-N-benzoylserine, m. 184-5° (aq. EtOH). Similarly 2-phenylxazolone HCl salt gave 82.3% O-hippuryl-N-benzoylserine, m. 161-1.6° (aq. Me₂CO). Various O-peptides were treated with NH₄OH of various concns. up to 25% and kept 1-24 hrs., yielding ppts. of amides of benzoylphenylalanine, benzoylvaline, and hippuric acid, the starting materials being O-benzoylphenylalanyl-N-benzoylserine, O-benzoylvalyl-N-benzoylserine, O-hippuryl-N-benzoylserine, o-benzoylphenylalanyl-N-benzoylthreonine, the amide of O-benzoylphenylalanyl-N-benzoylserine, O-benzoylphenylalanyl-N-benzoylthreonine, and the Et ester of benzoylphenylalanine (1), resp. The yields of the amides from the 1st two peptides listed above decline rapidly with reduction of the concn. of NH₄OH, while the amide from the hippuryl deriv is substantially independent of NH₄OH concn. The ammonolysis of 1 was very slow under these conditions. Heating O-hippuryl-N-benzoylserine with 8-27 moles H₄NCH₂CO₂Et 24-77° 6-10 hrs. gave up to 92% ppt. of the salt of the 2 components, m. 145°, when the reaction was run in EtOAc; expts. in aq. Me₂CO gave only tar; omitting the sol-

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CIA-RDP86-00513R000824330006-5

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

KAVERZNEVA, Ye. D.; KONOVALOVA, M. I.

Synthesis of N- β -(β -asparagine)-D-glucosamine, O- β -methyl-N-(α -methyl- β -L-asparagine)-D-glucosaminide and their derivatives. Izv. AN SSSR. Otd. khim. nauk no.1:124-128 '63.
(MIRA 16:1)

1. Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR.

(Glucosamine)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5

KONOVALOVA, M. K.

KONOVALOVA, M. K. -- "Influence of Kemeri Mineral Drinking Water, Which was Discovered in 1948, on Certain Aspects of the Water-Salt Exchange." Acad Sci Latvian SSR Inst of Experimental Medicine, 1954 (Dissertation for the Degree of Candidate of Biological Sciences)

SO: Izvestiya Ak. Nauk Latvivskoy SSR, No. 9, Sept., 1955

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824330006-5"

KONOVALOVA, M. (Riga)

Effect of hydrogen sulfide baths on arterial blood pressure,
electroplethysmogram of the brain and peripheral vessels. Report 1.
Vestis Latv ak no.10:171-176 '59. (EEAI 9:10)

1. Akademiya nauk Latviyskoy SSR, Institut eksperimental'noy
meditsiny.

(HYDROGEN SULFIDE)
(BATHS, MEDICATED)
(BLOOD PRESSURE)
(PLETHYSMOGRAPH)

KONOVALOVA, M. (Riga)

Effect of the mineral water from Adamova Spring on the stomach
secretory and evacuatory functions. Vestis Latv ak no.1:153-159
'60. (EEAI 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut eksperimental'noy
meditsiny.
(LATVIA-MINERAL WATERS)
(STOMACH)

KONOVALOVA, M. (Riga)

Effect of dibazol on certain indexes of peripheral and cerebral circulation of the blood. Vestis Latv ak no.2:161-164 '60.
(EEAI 10:1)

1. Akademiya nauk Latviyskoy SSR, Institut eksperimental'noy meditsiny.
(BLOOD) (DIBAZOL)

KONOVALOVA, M. (Riga)

Reflexive effect of Kemeri drinking mineral water on the size of
the spleen. Vestis Latv ak no.6:167-172 '60.

(EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut eksperimental'noy medit-
siny.

(REFLEXES) (LATVIA—MINERAL WATERS) (SPLEEN)

17(2)

SOV/16-59-6-27/46

AUTHORS: Grif, F.S. and Konovalova, M.P.

TITLE: The Duration of Viability of Shigella Shigae in Excretia. Author's Summary

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959,³² Nr 6, p 120 (USSR)

ABSTRACT: The authors carried out tests to determine the viability of Shigella shigae in stools and the chances of culturing them at various periods of time after the sample has been taken. The results showed that it is not essential to culture the stool samples in the first 1-2 hours after defecation, nor to resort to preserving agents, since the Shigella can survive for long periods (5-63 days). On the first or second day after defecation the Shigella shigae could be cultured in 85.3% of the cases (where, naturally, the original stool sample was positive). The microbes could be cultured in the remaining 14.7% of the cases by subcultures on a nutrient medium. Thus, after the first obligatory cultivation of stool samples on the first day that they arrive in the laboratory, it is

Card 1/2

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CIA-RDP86-00513R000824330006-5

SOV/16-59-6-27/46

The Duration of Viability of Shigella Shigae in Excretia. Author's Summary.

necessary to subject suspect samples to reculture on the second day to test for the presence of Shigella shigae.

ASSOCIATION: Sanitarno-epidemiologicheskaya stantsiya petrogradskogo rayona Leningrada
(Sanitary-epidemiological Station of the Petrograd District of Leningrad)

SUBMITTED: August 13, 1958

Card 2/2

IVANOV, A.V.; YOTIYEVA, N.N.; OSIROVA, R.P.; KONOVALOVA, N.V.

Stratigraphy, and oil and gas potentials of Permian sediments
in the southeastern part of the Pechora Depression and upper
Pechora Valley. Trudy VNIGRI no.133:204-232 '59.

(MIRA 13:1)
(Pechora Valley--Petroleum geology)
(Pechora Valley--Gas, Natural--Geology)

KONOVALOVA, M.V.

New Late Carboniferous and Early Permian fusulinids in the Timan-Pechora region. Paleont.zhur. no.1:47-57 '62. (MIRA 15:3)

1. Ukhtinskoye geologicheskoye upravleniye.

(Pechora Valley--Foraminifera, Fossil)

(Timan Ridge--Foraminifera, Fossil)

KONOVALOVA, M.V.

New species of Sakmara Foraminifera of the Timan-Pechora area.
Paleont. zhur. no.3:16-23 '62. (MIRA 15:9)

1. Ukhtinskoye geologicheskoye upravleniye.
(Pechora Valley--Foraminifera, Fossil)
(Timan Ridge--Foraminifera, Fossil)

"Lifetime" were found to depend upon one method of preparation.
Card 1/2

UDC: 621.319.2:547.583.6:547.583.2

0926 0270

APPROVED FOR RELEASE

06/19/2000 CIA-RDP86-00513R000824330006-5

ACC NR: AP7003651

substantial differences between electrets of N'-acryloyl- and N'-acetylsubstituted arylsulfonyhydrazides were observed, determined by the nature of the acyl radical. For the N'-acryloyl derivatives, the highest charge was obtained in electrets prepared from H'-acryloyl derivatives of p-nitro- and p-iodobenzenesulfonyhydrazides, while for the acylsubstituted derivatives, the highest charge was observed in the electrets prepared from N'-acetylbenzenesulfonyhydrazide, unsubstituted in the aromatic ring. The best mechanical properties (ability for tri-ication when heated 10-15° above the melting point, high mechanical strength) and the longest "lifetime" were manifested by electrets of arylsulfonyhydrazides containing unsaturated aliphatic carboxylic acid residues in the N'-position. Orig. art. has: 3 tables. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 24Apr65 / ORIG REF: 004 / OTH REF: 004

Card 2/2 Jb

DZHIDZHEJAVA, A.B.; KONOVALOVA, M.Ye.; KOSTENKO, V.I.; DYKHAMOV, N.N.

Study of organic electrets. Part 1: Hydrazides of aromatic sulfonic acids. Zhur. ob. khim. 35 no.5:831-833 My '65.
(MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, atsintillyatsionnykh materialov i osobo chistiykh khimicheskikh veshchestv, Khar'kov.

KONOVALOVA, M.Z.

Electronarcosis in the treatment of skull and brain injuries.
Zdrav. Knzakh. 17 no.9:35-39 '57. (MIRA 12:6)

1. Iz kliniki obshchey khirurgii Kazakhskogo gosudarstvennogo
meditsinskogo instituta i Instituta khirurgii AN KazSSR.
(BRAIN--WOUNDS AND INJURIES)(ELECTRIC ANESTHESIA)

YEVDOKIMOVA, N.S.; KONOVALOVA, M.Z.

Phagocytic reaction in patients with rheumatic fever. Zdrav. Kazakh.
21 no.1:40-43 '61. | (MIRA 14:3)

1. Iz kafedry mikrobiologii (zav. - professor E.I.Shtikkel') i
kafedry fakul'tetskoy terapii (zav. - dotsent Ye.A.Mezenchuk)
Kazakhskogo meditsinskogo instituta.
(PHAGOCYTOSIS) (RHEUMATIC FEVER)

KONOVALOVA N. A.

CA

19

The use of quartz glass tubes. F. A. Kurnyankin and N. A. Kozhevnikova. *J. Chem. Ind.* (U. S. S. R.) 17, No. 7, 45-6 (1940).—Clear quartz tubes resist internal pressure better than vitreous or nontransparent ones.
W. M. Leicester

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION												ELECTRICAL EQUIPMENT													
SIGNI STYLISATION												SIGNI SIGNAV													
140700 01 100000 MAX DAY ONE												WELLINGTON													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

KONOVALOVA, N.A.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62265

Author: Kurlyankin, F. A., Konovalova, N. A.

Institution: None

Title: Mechanical Strength of Quartz Glass at Different Temperatures

Original

Periodical: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1955, No 34, 58-67

Abstract: Investigation of mechanical properties of transparent and opaque quartz glasses at 20-1,200°. Transparent quartz glass of composition (in %): SiO₂ 99.9; R₂O₃ 0.01; CaO 0.01; MgO 0.005; R₂O 0.02; extraneous admixtures 0.20. Opaque quartz glass of composition (in %): SiO₂ 99.5; R₂O₃ 0.30; CaO 0.21; MgO 0.03; extraneous admixtures 0.15; R₂O not determined. Investigated was the bending strength of specimens of the transparent glass in the shape of rods of circular cross sections 10-14 mm in diameter, 110 mm long, with fused surfaces, and of opaque glass in the shape of bars with square

Card 1/3

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62265

Abstract: cross section, measuring 15 x 15 x 110 mm with ground sides. Mean value of bending strength of transparent quartz glass (at 23°) was 1,131.2 kg/cm², that of the opaque glass 455 kg/cm². The tests revealed that bending strength of both transparent and opaque quartz glass increases with rising temperature already at 200° and at 1,200° it is increased, in comparison with its value at 200°, by 36% in the case of opaque glass and by 52% in the case of the transparent. A study was made of the resistance of quartz glasses to impact flexure; tested were specimens in the form of square cross section bars, with ground surfaces, measuring 15 x 15 x 115 (transparent) and 22.5 x 22.5 x 115 mm (opaque). Breaking energy on impact flexure (at ordinary temperature) was of 0.85 kGm/cm² for opaque glass and 1.08 kGm/cm² for transparent glass. With increase in temperature it increased and at 1,200° attained, respectively, 1.48 and 1.74 kGm/cm². Polished specimens had a strength exceeding by 12% that of ground specimens. Tensile strength determined at ordinary temperature was of 226 kg/cm² for opaque and of 734 kg/cm² for transparent glass. With increase in temperature tensile

Card 2/3

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62265

Abstract: strength increased and rose at 1,200° by 74% in the case of the opaque glass and by 60% in the case of the transparent glass. Compression strength of quartz glass samples in the shape of cubes with 25 mm edges and ground surfaces was at ordinary temperature 3,122 kg/cm² for the opaque glass and 6,556 kg/cm² for the transparent. Strength of polished specimens was 8-10% higher. Lower strength of opaque glass as compared with the transparent is due to chemical heterogeneity (unfused quartz granules) and greater amount of small bubbles (300,000 to 900,000 bubbles per one cm³, the volume of the voids amounting to 4-5%). Chemical heterogeneity and bubbles are the cause of the formation of internal fissures which contribute to the breakdown of the glass. Increase in mechanical strength of quartz glass with increasing temperature is due to decreasing brittleness of the material.

Card 3/3